

We Claim:

1. ~~A communication system for interacting with a switched circuit network and for providing multiple line appearances at a terminal of a computer network, the system comprising:~~

~~a gateway in communication with the switched circuit network, the gateway being operative to translate switched circuit network-compatible signals into computer network-compatible signals; and~~

~~a signal routing agent in communication with the gateway and with one or more terminals, the signal routing agent being operative to receive plural incoming calls from the gateway addressed to a selected one of the terminals and programmed to simultaneously transmit plural line appearance signals to the selected terminal.~~

2. ~~The system of claim 1, wherein said terminal includes a user interface configured to simultaneously display multiple line appearance messages received from the signal routing agent.~~

3. ~~The system of claim 1 for use with plural interrelated terminals in a key system configuration, and wherein:~~

~~the signal routing agent is in communication with the respective terminals, and is responsive to receipt of an incoming call to transmit a corresponding line appearance signal to each of the respective terminals.~~

4. ~~The system of claim 1 further including:~~
~~a configuration database storing terminal information and wherein:~~
~~the signal routing agent is responsive to receipt of an incoming call addressed to one of the terminals to access the configuration database, determine the corresponding terminals to receive line appearances, and to transmit a line appearance message to the appropriate~~

*Sub
as*
~~terminal or terminals.~~

5. The system of claim 4 wherein:
the configuration database comprises an association table.

6. The system of claim 1 wherein:
the signal routing agent comprises a call routed gatekeeper.

7. The system of claim 1 wherein:
the signal routing agent comprises a call control service entity.

8. The system of claim 1 wherein:
the gateway and signal routing agent are constructed to operate under an H.323
standard.

*Sub
as*
9. ~~A communication system for mapping a single incoming call to plural~~
terminals of a computer network, the system comprising:
a signal routing agent;
a gateway adapted to receive the incoming call, the gateway being operative to
translate the incoming call into computer network-compatible signals;
at least one gatekeeper in communication with the gateway and responsive to receipt
of the incoming call to control the gateway to transmit the computer network-compatible
signals to the signal routing agent; and
the signal routing agent being responsive to receipt of the computer network-
compatible signals to determine the corresponding terminals assigned to receive the signals
and to transmit line appearance messages to the respective terminals.

10. ~~The system of claim 9 further including:~~

a configuration database storing data associating numbers of incoming calls to corresponding terminals and wherein:

the signal routing agent is programmed to access the configuration database to identify the appropriate terminals.

11. The system of claim 9 further including:

a second gatekeeper, said one gatekeeper being in communication with the gateway and said second gatekeeper being in communication with said one gatekeeper, the signal routing agent, and the respective terminals.

12. The system of claim 9 wherein:

the signal routing agent comprises a call control service entity.

13. The system of claim 9 wherein:

the signal routing agent comprises a call routed gatekeeper.

14. The system of claim 12 wherein:

the call control service entity comprises a multi-point control unit and a call manager.

15. ~~A method of displaying plural line appearances at a terminal end point in a computer network, comprising the steps of:~~

receiving plural incoming calls addressed to a particular number;

accessing a configuration database to determine the end-point or end-points associated with the addressed number;

transmitting plural line appearance signals to each of the associated end-points; and

displaying the plural line appearances at each terminal end-point.

16. The method of claim 15 wherein the step of displaying comprises generating a scrollable list of the plural line appearances.

Sub AB
5 0917700-102398
~~17. A method of mapping a single incoming call addressed to a particular number to plural terminals via an H.323-based communication system, comprising the steps of:
receiving the incoming call;
translating the incoming call into an H.323-compatible signal;
accessing a configuration database to determine the terminals corresponding to the dialed number; and
transmitting line appearance signals to each of the respective terminals.~~

18. The method of claim 17 wherein the line appearance signals are transmitted approximately simultaneously.

19. A method of establishing an attendant/attendee relationship between plural terminal end-points via an H.323-based communication system, comprising the steps of:
creating a configuration database storing attendant and attendee relationships between respective ones of the terminal end-points;

5
receiving an incoming call addressed to a particular number;
accessing the configuration database to determine if the number corresponds to an attendant or attendee terminal end-point;

if the number corresponds to an attendant terminal end-point, transmitting a line appearance to the attendant terminal end-point; and

10
if the number corresponds to an attendee terminal end-point, transmitting line appearances to the attendee terminal end-point and to the attendant terminal end-point associated in the configuration database with the attendee.